

REMARKS

Applicants respectfully request reconsideration of the present application in view of foregoing amendments and the reasons that follow.

I. Status of the Claims

Claims 1-42 and 66-99 are withdrawn. Claims 100-102 were previously canceled.

Claims 45, 50, 53, 56, 59, 64 and 65 are currently amended. Claims 56-61, 63-65, and 100-102 are canceled. Claims 103-115 are newly added.

No new matter is introduced. After the entry of this Amendment, claims 43-55, 62 and 103-115 are under examination.

II. Rejection under 35 U.S.C. §112, first paragraph

The Examiner rejects claim 61 as allegedly failing to comply with the written description requirement. (Office Action, page 2)

Applicants have canceled claim 61 rendering the rejection moot. Applicants respectfully traverse as it may apply to new claim 115.

Applicants draw the Examiner's attention to the Specification pages 17-18. On these pages, the Specification describes how PEG can be attached to the polymer backbone and how heparin can be attached to the polymer backbone through a PEG spacer.

Because the Specification provides description sufficient to allow one skilled in the art to understand what the claim is and that the Applicants had possession of claimed invention, claim 115 meets the written description requirement.

Applicants respectfully request the reconsideration and withdrawal of the rejection.

III. Rejection under 35 U.S.C. §112, second paragraph

The Examiner rejects claims 50, 53 and 63 as allegedly being indefinite. (Office Action, page 3) Applicants have amended claims 50 and 53 and canceled claim 63 rendering the rejection moot.

III. Rejection under 35 U.S.C. §103(a) over Hilborn in view of Koulik

A. Claims 43, 59 and 60

The Examiner rejects claims 43, 59 and 60 as allegedly being obvious over Hilborn (WO 2004/021976) in view of Koulik (EP 0947205). (Office Action, page 5) Applicants respectfully traverse.

Amended claim 43 recites “a non-fouling moiety...wherein the non-fouling moiety is selected from the group consisting of PEG, polyalkene oxides, hydroxyethylmethacrylate (HEMA), poly(n-propylmethacrylamide), sulfonated polystyrene, hyaluronic acid, poly(vinyl alcohol), poly(N-vinyl-2-pyrrolidone), sulfonated dextran, and combinations thereof”. The support for the amendment can be found in the Specification at pages 6 and 7. No new matter is introduced.

Hilborn in view of Koulik cannot render the amended claim 43 obvious. Neither Hilborn nor Koulik teaches including a non-fouling moiety as recited.

Claims 59 and 60 have been canceled. The rejection of them is moot.

Applicants respectfully request the reconsideration and withdrawal of the rejection.

B. New claims 103-115

Support for claim 103 can be found in the Specification at pages 13-15, particularly in schemes 3 and 4 and related descriptions. Support for claim 104 can be found on pages 13 and 14, particularly in schemes 1 and 2 and related descriptions. Support for claim 106 can be found on page 12. Support for other new claims can be found in the original claims. No new matter is introduced.

Hilborn in view of Koulik cannot render claims 103-114 obvious.

Claim 103 recites that “the biocompatible polymer comprises a component which is derived from substituted ϵ -caprolactone, substituted β -butyrolactone, glycerine, or 2-hydroxyl-1,3-propylene diamine”.

Neither Hilborn nor Koulik teaches or suggests this feature. Hilborn teaches a polymer derived from plain ϵ -caprolactone or plain β -butyrolactone. However, it does not teach a polymer derived from substituted ϵ -caprolactone or substituted β -butyrolactone. This is because Hilborn is only concerned with attaching phosphoryl choline at an end of the polymer. Thus, Hilborn does not provide any suggestion or motivation for modifying the polymer disclosed therein in arriving at claim 103.

At least for the same reason, Hilborn in view of Koulik cannot render dependent claims 104-115 obvious.

IV. Rejection under 35 U.S.C. §103(a) over Hilborn in view of Koulik and Wright

A. Claims 43-49 and 65

The Examiner rejects claims 43-49 and 65 as allegedly being obvious over Hilborn in view of Koulik and further in view of Wright (US 6,273,913). (Office Action, page 6) Applicants respectfully traverse.

As discussed above, Neither Hilborn nor Koulik teaches including a non-fouling moiety as recited in the amended claim 43. Wright does not cure this deficiency because it does not teach including a non-fouling moiety as recited.

Therefore, Hilborn, Koulik and Wright cannot render the amended claim 43 obvious. At least for the same reason, these references cannot render dependent claim 65 obvious.

Applicants respectfully request the reconsideration and withdrawal of the rejection on this ground.

B. New claims 103-115

Hilborn in view of Koulik and further in view of Wright cannot render claims 103-114 obvious.

Claim 103 recites that “the biocompatible polymer comprises a component which is derived from substituted ϵ -caprolactone, substituted β -butyrolactone, glycerine, or 2-hydroxyl-1,3-propylene diamine”.

As discussed above, neither Hilborn nor Koulik teaches or suggests this feature. Wright does not cure this deficiency. Wright generally teaches a biocompatible polymer such as lactone based polyester and polycaprolacton-glycolide. See Col. 6, ll. 25-40. However, it does not teach or suggest a polymer comprising a component which is derived from substituted ϵ -caprolactone, substituted β -butyrolactone. This is because Wright is not concerned with attaching phospholipid to the polymer. It does not provide any motivation to modify the polymer in arriving at claim 103.

At least for the same reasons, Hilborn, Koulik and Wright cannot render claims 104-115 obvious.

V. Rejection under 35 U.S.C. §103(a) over Hilborn in view of Koulik and Wright and further in view of Marchant

A. Claims 43, 45, 50-61 and 64

The Examiner rejects claims 43, 45, 50-61 and 64 as allegedly being obvious over Hilborn in view of Koulik and Wright and further in view of Marchant (US 5,455,040). (Office Action, page 8) Applicants respectfully traverse.

Claims 56-61 and 64 have been canceled. The rejection of them is moot.

As discussed above, none of Hilborn, Koulik and Wright teaches including a non-fouling moiety as recited in the amended claim 43. Marchant does not cure this deficiency because it does not teach including a non-fouling moiety as recited.

Therefore, Hilborn, Koulik, Wright and Marchant cannot render the amended claim 43 obvious. At least, for the same reason, they cannot render dependent claim 45 and 50-55 obvious.

Applicants respectfully request the reconsideration and withdrawal of the rejection.

B. New claims 103-115

Hilborn, Koulik, Wright and Marchant cannot render claims 103-114 obvious.

Claim 103 recites that “the biocompatible polymer comprises a component which is derived from substituted ϵ -caprolactone, substituted β -butyrolactone, glycerine, or 2-hydroxyl-1,3-propylene diamine”.

As discussed above, none of Hilborn, Koulik, and Wright teaches or suggests this feature. Marchant does not cure this deficiency. Marchant describes a surface of plasma polymerized N-vinyl-2-pyrrolidone or allyl alcohol attached to an anticoagulant such as heparin. *See Abstract.* It does not teach or suggest a polymer comprising a component which is derived from substituted ϵ -caprolactone, substituted β -butyrolactone. It does not provide any motivation to modify the polymer in arriving at claim 103.

At least for the same reasons, Hilborn, Koulik, Wright and Marchant cannot render claims 104-115 obvious.

VI. Rejection under 35 U.S.C. §103(a) over Hilborn in view of Uhrich, Falatico, and Wright

A. Claims 43, 45, 62 and 63

The Examiner rejects claims 43, 45, 62 and 63 as allegedly being obvious over Hilborn in view of Uhrich (US 2004/009476), Falotico (US 2001/0029351) and Wright. (Office Action, page 8) Applicants respectfully traverse.

As discussed above, neither Hilborn nor Wright teaches including a non-fouling moiety as recited in the amended claim 43. Uhrich and Falotico do not cure this deficiency.

Uhrich teaches a therapeutic device comprising a polymeric anti-inflammatory agent that biodegrades to release anti-inflammatory agents. See Abstract. Falotico teaches a medical device having ethylene-co-vinylacetate and polybutylmethacrylate coating which is incorporated with rapamycin or other drugs. See [0047], [0048], and [0062].

Therefore, Hilborn, Urich, Falotico and Wright cannot render the amended claim 43 obvious. At least, for the same reason, they cannot render dependent claims 45, 62 and 63 obvious.

Applicants respectfully request the reconsideration and withdrawal of the rejection.

B. New claims 103-115

Hilborn, Uhrich, Falotico, and Wright cannot render claims 103-114 obvious.

Claim 103 recites that “the biocompatible polymer comprises a component which is derived from substituted ϵ -caprolactone, substituted β -butyrolactone, glycerine, or 2-hydroxyl-1,3-propylene diamine”.

As discussed above, neither Hilborn nor Wright teaches or suggests this feature. Uhrich and Falotico do not cure this deficiency. They do not teach or suggest a polymer comprising a component which is derived from substituted ϵ -caprolactone, substituted β -butyrolactone. They do not provide any motivation to modify the polymer in arriving at claim 103.

At least for the same reasons, Hilborn, Uhrich, Falotico, and Wright cannot render claims 104-115 obvious.

VII. Obviousness Type Double Patenting Rejection over US Patent No. 7,396,541

The Examiner rejects claims 43-45, 47, 48 and 65 as being allegedly being obvious over claims 1-4, 6-9, and 11-14 of U.S. Patent No. 7,396,541 in view of Koulik. (Office Action, page 12) Applicants respectfully traverse.

A. Claims 43-45, 47,48 and 65

The issued claims cannot render the rejected claims obvious. For instance, issued claim 1 reads:

“A medical device comprising as a coating a prodrug, the prodrug comprising a drug, heparin, and a polymer,

wherein the heparin is linked to the polymer;

wherein the drug is linked to the heparin or the polymer; and

wherein the polymer is poly(L-lysine-co-ethylene glycol) (PLL-co-PEG), poly(L-lysine-co-hyaluronic acid) (PLL-co-HA), poly(L-lysine-co-phosphoryl choline) (PLL-co-PC), poly(L-lysine-co-PVP), poly(ethylimine-co-ethylene glycol) (PEI-co-PEG), poly(ethylimine-co-hyaluronic acid) (PEI-co-HA), poly(ethylimine-co-phosphoryl choline) (PEI-co-PC), poly(ethylimine-co-vinylpyrrolidone) (PEI-co-PVP), poly(L-lysine-g-ethylene glycol) (PLL-g-PEG), poly(L-lysine-g-hyaluronic acid) (PLL-g-HA), poly(L-lysine-g-phosphoryl choline) (PLL-g-PC), poly(L-lysine-g-PVP), poly(ethylimine-g-ethylene glycol) (PEI-g-PEG), poly(ethylimine-g-hyaluronic acid) (PEI-g-HA), poly(ethylimine-g-phosphoryl choline) (PEI-g-PC), and poly(ethylimine-g-vinylpyrrolidone) (PEI-g-PVP).”

Claim 1 and Koulik fail to teach a biocompatible polymer having a non-fouling moiety as recited. Thus claim 1 of the ‘541 in view of Koulik cannot render claims 43-45, 47, 48 and 65 obvious. For the same reason, other issued claims cannot render claims 43-45, 47, 48 and 65 obvious.

Furthermore, the present applicant will not unjustly extend the right to exclude. The ‘541 patent issued from a divisional application of 10/871,658 filed on June 18, 2004. The present application was filed on March 22, 2004. Thus, the ‘541 patent has a later effective filing date for the purpose of determining patent term.

Applicants respectfully request the reconsideration and withdrawal of the rejection.

B. New claims 103-115

The issued claims of the ‘541 patent cannot render claims 103-115 obvious.

Claim 103 recites that “the biocompatible polymer comprises a component which is derived from substituted ϵ -caprolactone, substituted β -butyrolactone, glycerine, or 2-hydroxyl-1,3-propylene diamine”.

The issued claims in the ‘541 patent and Koulik do not teach this feature. They do not teach or suggest a polymer comprising a component which is derived from substituted ϵ -caprolactone, substituted β -butyrolactone. They not provide any motivation to modify the polymer in arriving at claim 103.

At least for the same reasons, the issued claims in the ‘541 patent and Koulik cannot render claims 104-115 obvious.

VIII. Provisional Obviousness Type Double Patenting Rejection over Application No. 11/171,111

The Examiner provisionally rejects claims 43 and 44 a being allegedly being obvious over claim 12 of co-pending application 11/171,111 in view of Koulik. (Office Action, page 13)

Application 11/171,111 was filed on June 29, 2005, thus it is a later filed application. While both applications are pending with rejections on other grounds, Applicants respectfully request that the provisional obviousness type double patenting rejection of claims 43 and 44 be held in abeyance until subject matter otherwise allowable is identified. Applicants will respond to the rejection on the merits should the rejection be maintained.

CONCLUSION

Based on the above amendments and remarks, this application is believed to be in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. **07-1850**. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. § 1.136 and authorize payment of any such extensions fees to Deposit Account No. **07-1850**.

Respectfully submitted,

Date 2/5/2009
SQUIRE, SANDERS & DEMPSEY LLP
One Maritime Plaza, Suite 300
San Francisco, CA 94111
Customer Number: 45159
Telephone: (415) 954-0313
Facsimile: (415) 393-9887

By 
Qun Liu, Esq.
Attorney for Applicants
Registration No. 55,392